

REMARKS

Claims 6-12, 14-16, 18, 20, 21, and 23-71 are pending, with claims, 6, 9, 24, 31, 40, 48, 55, and 64 being independent. Claims 6-12, 14-16, 18, 20, 21, and 23-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's "Description of the Related Art" (DRA) on pages 1-4 of the specification, in view of U.S. Patent No. 5,529,937 to Zhang et al. (Zhang).

Regarding preliminary matters, the title has been amended in accordance with the Examiner's requirement. Also, the claims have been amended to correct various informalities.

Regarding the rejection of claims 6-12, 14-16, 18, 20, 21, and 23-71 under 35 U.S.C. 103(a) as being unpatentable over Applicant's DRA in view of Zhang, Applicant respectfully submits that the proposed combination, even if valid, does not disclose or fairly suggest all of the recited elements of at least the independent claims 6, 9, 24, 31, 40, 48, 55, and 64.

In particular, in rejecting independent claims 6, 9, 31, 40, 55, and 64, the Office Action states in paragraph 5, at page 3, that Applicant's DRA teaches (with respect to FIG. 8 of the specification), "patterning the crystalline semiconductor film to form at least one crystalline island or active region (803) using only the first crystalline portion (see region A between the metal element 811 and 812...)." However, this rejection fails to consider the subsequent claim limitation(s) related to the "dummy metal region(s)" as those regions are defined in the above-mentioned claims.

That is, comparing FIGS. 7 and 8 of the specification, it is apparent that both figures include metal elements 702/703 and 811/812, respectively. However, FIG. 7 additionally includes elements 701 and 704, which are described in the specification as "dummy metal region(s)" in that they are not used to form crystalline semiconductor islands (as are elements 702, 703, 811, and 812). Rather, they are used to ensure that "the distance and crystal growth states of the crystal growth 723 and 726 (are) identical with the states of the crystal growth 724 and 725," so as to ensure that structures, for example, 711 and 713 have uniform characteristics with respect to one another (as opposed to structures 801 and 803 in FIG. 8) (see page 10, line 24 to page 11, line 17).

Applicant submits that there is no element of FIG. 8 that discloses or properly suggests the element(s) 701 or 704, nor is such an element of FIG. 8 discussed in the present Office Action. For example, independent claim 6 recites, "... patterning the crystalline semiconductor film to form at least one crystalline semiconductor island using only the first crystalline portion while **the second crystalline portion is not used to form the crystalline semiconductor island.**" Similarly, independent claim 9 recites, "... forming at least one active region of the semiconductor device in the first crystalline semiconductor region while **the second crystalline semiconductor region is not used to form an active region of the semiconductor device...**" Claims 31, 40, 55, and 64 recite similar language, i.e., "... wherein a portion of the crystalline semiconductor film formed by using one metal element added region is **not used to form crystalline semiconductor islands.**"

Based on the above, Applicant's DRA does not disclose or properly suggest at least the above claim elements. Moreover, as Zhang is cited only for its teaching related to an insulating surface for forming an amorphous semiconductor film, Zhang does not cure the deficiencies of Applicant's DRA.

As a result, independent claims 6, 9, 31, 40, 55, and 64 are allowable for at least the above reasons, so that dependent claims 7, 8, 10-12, 14-16, 18, 20, 21, 23, 32-39, 41-47, 56-63, and 65-71 are allowable for at least the same reasons.

Regarding the rejection of independent claims 24 and 48, Applicant points out that these claims recite the limitation "... wherein at least one of the metal element added regions has length extending 100 μ m or more longer from an end portion of the crystalline semiconductor island in a longitudinal direction of a metal element added region." In rejecting these claims, and with respect to the above-recited claim limitation, the Office Action states in paragraph 5, page 6, that "Applicant acknowledges that the lengths (C, D) of the first metal element added region (811) and the second element added region (812) are set to 50% or more of a crystal growth distance," and goes on to state that using 100 μ m or more would have been an obvious discovery of an optimum range.

However, Applicant, in fact, has not made any such admission regarding FIG. 8, nor does the Office Action point to such an admission by the Applicant. Applicant noted in the Response

file May 29, 2003 that if the (relevant) distance x is set to 50% or more of the crystal growth distance, the region where the semiconductor island region 101 is formed can be made the region where the crystal growth progresses linearly. However, this statement was specifically made with reference to page 7, lines 7-9 of the specification, which is a part of Applicant's "Summary of Invention," and which is not part of Applicant's DRA nor in reference to (prior art) FIG. 8.

Therefore, this statement, far from being an "acknowledgement" of any known prior art, relates to a novel and non-obvious technique for obtaining a linear progression of crystal growth in a desired region. In contrast, FIG. 8 merely shows that the metal element added region(s) 811, 812 have lengths extending beyond an end portion of the crystalline semiconductor island 801. Thus, the conditions for obtaining linear crystal growth in the context of, for example, FIGS. 7 and/or 8 are not disclosed in the prior art, so that the case law cited in the Office Action, which relates to optimization of known general conditions or solutions, is out of place.

As a result, Applicant's DRA does not disclose or fairly suggest all of the features of independent claims 24 and 48, and, as above, Zhang (cited only for its teaching of an insulating surface for forming an amorphous semiconductor film) does not cure the deficiencies of Applicant's DRA.

Accordingly, independent claims 24 and 48 are allowable for at least the above reasons, so that dependent claims 25-30 and 49-54 are allowable for at least the same reasons. Further, Applicant notes that independent claims 40 and 64, discussed above, also contain the same or similar claim language just discussed with respect to independent claims 24 and 48. As a result, independent claims 40 and 64 (and their respective dependent claims 41-47 and 65-71) are also allowable for at least the same reasons as claims 24 and 48.

Based on the above, all of the pending claims 6-12, 14-16, 18, 20, 21, and 23-71 are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.


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No Fee is believed due in connection with the filing of this paper. If any fees are due, please apply any charges or credits to deposit account 06-1050 under Reference 07977-213002.

Respectfully submitted,

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